

CLAIMS:

1. A method for photo-embossing a monomer-containing layer for obtaining a photovoltaic cell, a light emitting diode (LED), or a light emitting electrochemical cell (LEC) by the steps of:
 - (a) optionally providing one or more layers onto the surface of the monomer-containing 5 layer;
 - (b) irradiating through a mask a layer consisting of a homogeneous blend of at least two different compounds, at least one of which is a polymerizable monomer, to obtain a monomer-containing layer with exposed and non-exposed areas;
 - (c) optionally providing further layers onto the surface of the monomer-containing layer;
 - (d) expanding the exposed or the non-exposed areas by diffusing at least one of the 10 monomers to the exposed areas to obtain a corrugated surface of the layer; or interchanging steps c) and d).
2. The method according to claim 1 wherein at least a light emitting or 15 photovoltaic organic polymer layer is provided as a layer onto the corrugated surface and areas of the monomer-containing layer are expanded by applying a heat treatment at a temperature above the Tg of the light emitting or photovoltaic organic polymer.
3. The method according to claim 1 or 2 wherein a blend of at least one 20 polymerizable monomer and a polymer is used.
4. The method according to any one of claims 1-3 wherein the monomer-containing layer further contains at least one of a polymer, a photo-initiator, and a thermal initiator.
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5. The method according to claim 3 wherein the monomer is a (meth)acrylic monomer.

6. The method according to any of the previous claims wherein the photovoltaic cell is an organic photovoltaic cell or a hybrid organic-inorganic photovoltaic cell (Grätzel cell) and the LED is an organic LED, preferably comprising a light emitting polymer.

5 7. A LED or LEC comprising a substrate, superposed by a corrugated first electrode layer, superposed by a light emitting organic luminescent layer having an upper and a lower surface that follow the structure of the corrugated first electrode layer, superposed by a second electrode layer, and optionally further layers.

10 8. The LED or LEC of claim 7 comprising a substrate, superposed by a corrugated monomer-containing layer obtainable by the method of claim 1, superposed by a first electrode layer, superposed by a light emitting organic luminescent layer, superposed by a second electrode layer, and optionally superposed by a protective layer.

15 9. The LED or LEC of claim 7 or 8 wherein at least one of the layers is a reflective layer.

10. The LED or LEC of any one of claims 7-9 wherein at least one of the substrate, the corrugated monomer-containing layer, the first electrode layer, the second 20 electrode, and the optional protective layer is transparent.

11. The LED or LEC of any one of claims 7-10 wherein the light emitting organic luminescent layer is a light emitting polymeric (LEP) layer having a surface area being at least 30 %, preferably 50 to 100 %, greater than the planar projected area thereof.

25 12. A photovoltaic cell comprising a substrate, superposed by a corrugated monomer-containing layer obtainable by the method of claim 1, superposed by a first electrode layer, superposed by an organic photovoltaic layer, superposed by a second electrode layer, and optionally superposed by a protective layer, wherein one of the 30 electrodes acts as, or is equipped with, a reflective layer.